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IN THE CLAIMS:

1. (Currently Amended) A laser device for generating a laser pulse train formed of a sequence of laser pulses, comprising:

an output mirror;

a reflector mirror;

a gain medium located between said output mirror and reflector mirror for accumulating a laser gain;

a Q switch means for determining first and second pause periods located between said output mirror and reflector mirror for turning on and off a laser oscillation by said output mirror, reflector mirror, and gain medium, said Q switch means also for turning on laser oscillation during a the first pause period before a-generation of the laser pulse train, and for turning off the laser oscillation during a second pause period before a-generation of the laser pulse train; and

a nonlinear optical crystal irradiated with a fundamental wave laser light by the laser oscillation for generating a harmonic laser light.

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2. (Previously Amended) The laser device of claim 1, wherein said nonlinear optical crystal is located between said output mirror and reflector mirror.

3. (Previously Amended) The laser device of claim 1, further comprising a harmonic dispensing device for dispensing harmonic laser pulses located in an output path of the laser pulse.

4. (Original) The laser device of claim 3, wherein said harmonic dispensing device is an optical modulator.

5. (Previously Amended) The laser device of claim 1, wherein said output mirror is located between said reflector mirror and said nonlinear optical crystal.

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6. (Currently Amended) The laser device of claim 1, wherein the second pause period is equal to a period of the laser pulse train minus a duration comprising a width of each of the laser pulses extracted from a period of the laser pulse train.

7. (Currently Amended) The laser device of claim 1, wherein the second pause period is less than a period of the laser pulse train minus a duration comprising a width of each of laser pulses extracted from a period of the laser pulse train.

8. (Original) The laser device of claim 7, wherein a power of the laser pulse is controlled by the second pause period.

9. (Previously Amended) The laser device of claim 1, further comprising a filter for separating the harmonic laser light generated by said nonlinear optical crystal and the fundamental wave laser light.

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10. (Currently Amended) A method of controlling a laser device having an output mirror, a reflector mirror, and a gain medium located between said output mirror and reflector mirror for accumulating laser gain, for generating a laser pulse train including formed of a first laser pulse at a beginning thereof and a second laser pulse next to the first laser pulse sequence of laser pulses by a laser oscillation by said output mirror, reflector mirror and gain medium, said method comprising:

turning on the laser oscillation during a first pause period before a generation of the first laser pulse train, wherein the laser light continuously oscillates during the first pause period; and

turning off the laser oscillation during a second pause period before a generation of the first laser pulse; and

turning off the laser oscillation during a period identical to the second pause period before generation of the second laser pulse and after the generation of the first laser pulse, wherein an interval between the first and second laser pulses is shorter than a sum of the first and second pause periods.

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11. (Previously Amended) The method of claim 10, further comprising dispensing only the laser pulse.

12. (Currently Amended) The method of claim 11, wherein said dispensing only the laser pulse comprises ~~the dispensing only the laser pulse by an optical modulator.~~

13. (Currently Amended) The method of claim 10, wherein the second pause period is equal to a period of the laser pulse train minus ~~a duration comprising a width of each of the laser pulses extracted from a period of the laser pulse train.~~

14. (Currently Amended) The method of claim 10, wherein the second pause period is less than a period of the laser pulse train minus ~~a duration comprising a width of each of the laser pulses extracted from a period of the laser pulse train extracted by the width of the laser pulse.~~

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15. (Previously Amended) The method of claim 14, wherein a power of the laser pulse is controlled according to the second pause period.

16. (Previously Amended) The method of claim 10, further comprising generating harmonic laser light from a fundamental wave laser light by the laser oscillation.

17. (Previously Amended) The method of claim 16, further comprising separating the harmonic laser light and the fundamental wave laser light.

18. (Currently Amended) A laser processing machine for processing an article including a laser device for generating a laser pulse train formed of a sequence of laser pulses, said laser device comprising:

an output mirror;

a reflector mirror;

a gain medium located between said output mirror and reflector mirror for accumulating a laser gain;

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~~a~~ Q switch means for determining first and second pause periods located between said output mirror and reflector mirror for turning on and off the laser oscillation by said output mirror, reflector mirror and gain medium, said Q switch means also for turning on laser oscillation during ~~a~~ the first pause period before ~~a~~ generation of the laser pulse train, and for turning off the laser oscillation during ~~a~~ the second pause period before ~~a~~ generation of the laser pulse train; and

a nonlinear optical crystal irradiated with a fundamental wave laser light by the laser oscillation for generating a harmonic laser light.

19. (Previously Amended) The laser processing machine of claim 18, wherein said nonlinear optical crystal is located between said output mirror and reflector mirror.

20. (Previously Amended) The laser processing machine of claim 18, further comprising a harmonic dispensing device for dispensing harmonic laser pulses located in an output path of the laser pulse.

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21. (Previously Amended) The laser processing machine of claim 20, wherein said harmonic dispensing device comprises an optical modulator.

22. (Previously Amended) The laser processing machine of claim 18, wherein said output mirror is located between said reflector mirror and said nonlinear optical crystal.

23. (Currently Amended) The laser processing machine of claim 18, wherein the second pause period is equal to a period of the laser pulse train minus a duration comprising a width of each of the laser pulses ~~extracted from a period of the laser pulse train.~~

24. (Currently Amended) The laser processing machine of claim 18, wherein the second pause period is less than a period of the laser pulse train minus a duration comprising a width of each of the laser pulses ~~extracted from a period of the laser pulse train.~~



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25. (Original) The laser processing machine of claim 24, wherein a power of the laser pulse is controlled with the second pause period.

26. (Previously Amended) The laser processing machine of claim 18, further comprising a filter for separating harmonic laser light generated by the nonlinear optical crystal and the fundamental wave laser light.

27. (Previously Amended) The laser processing machine of claim 18, wherein the article is a printed circuit board.

28. (Currently Amended) A method of processing an article using a laser processing machine including a laser device having an output mirror, a reflector mirror, and a gain medium located between said output mirror and reflector mirror for accumulating a laser gain, for generating a laser pulse train including formed of a first laser pulse at a beginning thereof and a second laser pulse next to the first laser pulse sequence of

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~~periodic laser pulses~~ by a laser oscillation by said output mirror, reflector mirror and gain medium, said method comprising:

turning on the laser oscillation during a first pause period before a generation of the first laser pulse train, wherein the laser light continuously oscillates during the first pause period; and

turning off the laser oscillation during a second pause period before a generation of the first laser pulse; and

turning off the laser oscillation during a period identical to the second pause period before generation of the second laser pulse and after the generation of the first laser period, wherein an interval between the first and second laser pulses is shorter than a sum of the first and second pause periods.

29. (Previously Amended) The method of claim 28, further comprising dispensing only the laser pulse.

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30. (Previously Amended) The method of claim 29, wherein said dispensing only the laser pulse comprises dispensing only the laser pulse by an optical modulator.

31. (Currently Amended) The method of claim 28, wherein the second pause period is equal to a period of the laser pulse train minus a duration comprising a width of each of the laser pulses extracted from a period of the laser pulse train.

32. (Currently Amended) The method of claim 28, wherein the second pause period is less than a period of the laser pulse train minus a duration comprising a width of each of the laser pulses extracted from a period of the laser pulse train.

33. (Original) The method of claim 32, wherein a power of the laser pulse is controlled with the second pause period.

34. (Previously Amended) The method of claim 28, further comprising generating a harmonic laser light from a fundamental wave laser light by the laser oscillation.

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35. (Previously Amended) The method of claim 34, further comprising separating the harmonic laser light and the fundamental wave laser light.

36. (Previously Amended) The method of claim 28, wherein the article is a printed circuit board.

37. (Currently Amended) The laser device of claim 1, wherein said gain medium oscillates laser light continuously.

38. (Currently Amended) The laser device of claim 1, further comprising means for irradiating said gain medium ~~is irradiated~~ with excitation light having an identical power during the first and second pause periods.

39. (Previously Added) The method of claim 10, further comprising:

irradiating the gain medium with excitation light having an identical power during the first and second pause periods.

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40. (Currently Amended) The laser processing machine of claim 18, wherein said gain medium continuously oscillates laser light ~~continuously~~.

41. (Currently Amended) The laser processing machine of claim 18, further comprising means for irradiating said gain medium ~~is irradiated~~ with excitation light having an identical power during the first and second pause periods.

42. (Currently Amended) The method of claim ~~10~~28, further comprising:

irradiating the gain medium with excitation light having an identical power during the first and second pause periods.